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ABSTRACT

The success or lack of success of the students who participated in the experimental pre-postsecondary programs conducted in four Ohio areas in 1974-75 was assessed. The program rationale was the need to offer students in grades 11 and 12 a diversity of pre-postsecondary programs to prepare them for postsecondary occupational or baccalaureate programs. Data were collected from the administrators, program coordinators, instructors, and students who participated in the programs through mail questionnaires and interviews. The conclusions include the following: (1) an effective and fiscally efficient pre-postsecondary program requires careful screening and selection of participants, (2) students completing the program did pursue postsecondary education, (3) students completing the program tended to pursue postsecondary areas of study other than the special areas studied in the program about as often as they pursued the special areas, (4) students and instructors perceived the program as an effective preparation for postsecondary education, (5) instructors and students agreed that the most important program outcome was helping students make a career choice, and (6) the opportunity for a hands-on experience for students rated high with both instructors and students. (Three sample questionnaires are appended.) (EM)

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FINAL REPORT

ED169276

A FOLLOW-UP STUDY

OF THE

PRE-POSTSECONDARY CURRICULUM PROGRAM IN OHIO

By

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October, 1978

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PREFACE

The rationale for the experimental pre-postsecondary program conducted in Ohio was based upon the concept that the typical college preparatory program could not prepare all students satisfactorily for a variety of postsecondary occupational programs. It was felt that there was a need to offer students of grades 11 and 12 a diversity of pre-postsecondary educational programs designed to increase the self-awareness of each student, develop in students favorable attitudes about the personal, social and economic significance of work and assist students in developing and practicing appropriate career decision-making skills.

The pre-postsecondary program was conducted in Akron City Schools, and in Great Oaks and Penta County Joint Vocational School Districts in Ohio during the period 1973-1975.

The Ohio Advisory Council for Vocational Education conducted a follow-up study of this program as a part of the Council's responsibility to "evaluate vocational programs, services, and activities assisted under the Vocational Education Act and Amendments and publish and distribute the results thereof." This responsibility is set forth in the Vocational Education Amendments of 1968 (PL 90-576) and 1976 (PL 94-482).

The Council acknowledges the cooperation of Mr. William Tenney, Director of Secondary Education, Akron City Schools, Dr. Harold Carr, Superintendent of Great Oaks JVSD and Dr. Leonard Kingsley, Superintendent of Penta County JVSD in the conduct of this study. Dr. George Kosbab

and Mr . Robert Balthaser, Assistant Directors of the Division of Vocational Education were most helpful in providing background data for this study.

Dr. Robert W. McCormick, Research Consultant of the staff of the Ohio Advisory Council for Vocational Education directed this study.

This evaluation is indicative of the commitment of the Council to the concept that vocational education as well as general academic education are necessary if Ohio is to service its people to the maximum education needed to sustain its economic growth.

Mr. Karl M. Kahler
Chairperson
Ohio Advisory Council for
Vocational Education

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Executive Director
Ohio Advisory Council for
Vocational Education

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I. BACKGROUND

A pre-postsecondary program was conducted in four (4) areas of Ohio in 1973-75 by the Division of Vocational Education of the Ohio Department of Education.[1]

The rationale for the development of this program was based upon the concept that the typical college preparatory programs in high schools could not prepare all students for a variety of postsecondary occupational programs. It was anticipated that a need existed to offer students in grades 11 and 12 a diversity of pre-postsecondary educational programs to prepare them for postsecondary occupational or baccalaureate programs.[2]

During the first year (1973-74) of this "experimental" program the following schools participated in the career areas indicated:

Penta County JVS	-	Health
Scarlet Oaks JVS	-	Health
Akron City (Firestone)	-	Health
Akron City (Firestone)	-	Engineering
Live Oaks JVS	-	Social Science
Live Oaks JVS	-	Engineering
Scarlet Oaks	-	Business
Clark Technical	-	(Seniors only during 1973-74)

(Clark Technical was not continued in 1974-75)

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[1] Pre-Postsecondary Evaluation Report, 1974-75, "The Kent State University, Bureau of Educational Research and Service, August, 1975.

[2] Statement taken from contracts between Division of Vocational Education, Ohio Department of Education, Penta County JVSD, Great Oaks JVSD, and Akron City Schools.

Since Kent State University completed an evaluation of the program in August, 1975, it seemed useful to focus this study, primarily, upon the activities of the students after 1975, and to obtain the students perceptions of the program several years after participating in the program.[3]

The following statements provide a brief description of the program objectives and program activities for each participating school in 1974-75.

Akron City - Firestone

Program Objectives

The second year of the two-year instructional program involved 21 students and provided 22.5 hours per week of pre-postsecondary instruction in the fields of engineering and health occupations for students in grades 11 and 12 and had the following objectives:

a. To provide for a liberal arts approach through "hands-on" experiences unique to vocational education.

b. To provide for career planning at the 11-12 grade levels.

c. To foster career interest in engineering and health occupations.

d. To develop in each student favorable attitudes about the personal, social, and economic significance of work.

e. To provide a broad educational foundation based upon the students' career objectives rather than the curriculum approach practiced in the traditional comprehensive high school.

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[3] Pre-postsecondary Evaluation Report, op. cit.

Description of Program Activities

The program continued in operation at Firestone High School with two teachers with backgrounds in education, engineering and health. Students were selected into the program during their junior year with a committee appointed by the superintendent of schools to review applications of interested students and make the selections. The program was made available to all eleventh grade students in the Akron Public Schools with 41 accepted into the program.

During the course of the year, an average of one period per day was devoted to mathematics fundamentals, principles and concepts. An average of one and one-half periods were devoted to the study of organic and inorganic chemistry. English and Social Studies were integrated and related to the students' career exploration activities during the balance of the time. Field experience portions of the pre-postsecondary program comprised a large portion of the curriculum. The activities were designed to provide the students with an understanding of the respective careers related to the program offering, to introduce the students to the personal and educational requirements of their tentative choice and to promote student understanding and acceptance of his or her abilities, interests and aptitudes in light of future occupational aspirations. In particular, the field experience centered around four activities. The first was to provide the student with specific understanding of the profession the student envisioned entering. This included one-to-one correspondence between the student and a practicing professional or technician. Secondly, the field experience provided the student with contact with other professionals in the same career cluster area in order to give

the perspective of the whole occupational area. This included visits to personnel outside of his specific area of interest. The third type of experience centered on application of work that students had or would perform in the classroom. For example, when the student had studied cells, and cell division, visitation was made to the American Cancer Society or to a cancer research laboratory. Finally, there were activities with colleges and professional schools that the students expressed an interest in attending.

Prior to a field experience each student was involved in preliminary activities along with the teacher. Objectives were defined as well as follow-up classroom activities related to the goals of the program. In addition to the field experiences, special projects providing experience centered learning were developed and implemented such as:

a. Classroom demonstrations and discussions with personnel from a variety of health and engineering backgrounds.

b. Individual and group laboratory experience related to mathematics, chemistry and physics studies, and their practical applications in health and engineering. A laboratory was constructed this past year which provided students with suitable equipment for laboratory activities.

c. Visits to university health and engineering facilities with discussions taking place with students and instructors.

d. Practical experiences with local hospitals, public and private health facilities and local industries. These ventures were planned by both students and teachers.

Penta County JVSD

Objectives

The program objectives were: 1) to implement a two-year instructional program which would provide 22.5 hours per week of pre-postsecondary instruction in the rield of health occupations for high school students in grades 11 and 12 and would be compatible with high school graduation requirements; 2) to insure the placement of all existing students in a postsecondary occupational progr_n or a baccalureate program.

Objectives for each student were: 1) to increase the self-awareness of each student; 2) to develop personal social and economic significances of work; 3) to assist each student in developing and practicing appropriate career decision-making skills.

Description of Activities

Activities for implementing the pre-postsecondary educational programs in health occupations were to:

a. Select an advisory committee of consultants from the ranks of high school teachers, technical college instructors, college and university staffs, guidance and counseling personnel, related professional personnel, and other persons whose contributions would be considered worthwhile.

b. Conduct an intensive workshop with superintendents and staffs of the joint vocational school district and member school districts to disseminate information and gather facts and statistics on need and potential enrollees.

c. Conduct workshops with the advisory committee of consultants to determine pre-postsecondary educational programs.

d. Equip pre-postsecondary laboratories.

e. Employ pre-postsecondary instructional staff.

f. Operate an experimental junior class during the 1973-74 academic year.

Great Oaks JVSD

Objectives

Programs were designed and implemented which allowed for 22.5 hours per week of pre-postsecondary instruction in the fields of business administration, engineering, health occupations and social sciences.

The curriculum of these programs were so designed to meet four basic objectives:

1. The student shall be able to qualify for entrance into a postsecondary educational institution in his or her chosen field.
2. The student will arrive at a better understanding of himself or herself in the following areas:
   a. aptitudes
   b. interests
   c. motivation
   d. economic, social and personal values
3. The student shall be able to make a realistic career decision.
4. The student shall be able to plan; analyze and evaluate his or her educational, occupational and personal goals and activities.

Within each of the four program areas objectives were developed that allowed for measurement of subject content learned by the students. These objectives were, of course, related to the specific career program area.

Description of Activities

Activities for the continued implementation of the pre-postsecondary programs in business administration, engineering, health occupations and social sciences included:

1. Summer workshops at Kent State University for all instructors associated with the pre-postsecondary programs for the development of curriculum and activities and evaluation of the 1973-74 year.
2. Contact during the summer months of 1974 with business, industry and professional institutions to arrange for activities for student experiences during the 1974-75 school year.
3. Continued contact with students enrolled in the programs to help evaluate their goals and summer experiences that were associated with their chosen career fields.
4. Review of and ordering of materials to be used during the 1974-75 school year.
5. Workshops during the school year for continued evaluation of the programs and development of teacher competencies.
6. Scheduling of students into experiences that allowed for "hands-on" activities in the areas of their chosen career fields.

The second year of the pre-postsecondary programs was organized with a four-day "in-class" career oriented activity centered core curriculum, a personal value clarification study program and a weekly full-day volunteer career field experience. All three of these areas of the program were equally important in the design and completion of the total program objectives, but the field experience was the most unique aspect and truly enabled the students to "try on" their career choices. A few of these "Experience Sites" included:

Health Occupations:

Cincinnati General Hospital

- Laboratory Technology-pathology Department
- Physical Therapy Department
- Occupational Therapy Department
- Trauma Intensive Care Unit
- Pediatric Department

Cincinnati Jewish Hospital

- Medical Library and Medical Records Departments
- Radiology Department
- Medical-Surgical
- Obstetrics Department

The Longview State Mental Hospital

- Children's Unit
- Gereatic's Unit

The Cincinnati Zoo

- Animal Care Unit

The Cincinnati Providence Hospital

- Emergency Room
- Out-patient Room
- Oncology Department

Clermont County Special Education and Training Center

- Physical Therapy Department
- Physical Education Department
- Special Education

Montgomery Animal Hospital

Small Animal Care - Surgical and Medical

Social Sciences:

Longview State Hospital
Teen Challenge Drug Rehabilitation Center
Loveland Pre-School Reading Readiness Testing Program
Hamilton County Court
Ohio Valley Clinic for Brain Damaged Children
Metro Housing Authority
Talbot House
Half Way House for Men and Women
Suicide Prevention Center

The program in pre-postsecondary business administration was discontinued after the first two weeks of the 1974-75 school year due to lack of students. The program in engineering was conducted in a "circuit rider" fashion with the instructor visiting the home schools of the students and working with them at this location and periodically meeting with the entire group for field experiences and study. The engineering program was discontinued after the first semester. The programs in health occupations and social sciences were continued throughout the entire school year following the format described above.

Funding of the Program

The data shown in Table 1 include only the funds provided by the Division of Vocational Education, Ohio Department of Education, for the direct instructional expenses for each program. Specific costs provided included, a project coordinator at each institution; at least one full time instructor for each program and several part time instructors, employee benefits, travel and supplies and materials including text books

TABLE 1

INSTRUCTORS, STUDENTS AND FINANCIAL RESOURCES
BY SCHOOL AND PROGRAM AREA DURING 1974-75

Program Area	Students			Instructors		Costs
	Spring 74	Fall 74	Spring 75	Full time	Part time	
Penta-Health	11	10	10	0	5	$ 27,032.00
Great Oaks-						49,639.00
Scarlet-Health	19	12	10	1	2	
Live Oaks-Soc. Service	16	5	3	0	1	
Live Oaks-Engr.	4	4	(a)	0	1	
Scarlet-Bus. Adm.	(b)					
Akron-Firestone						40,000.00
Health	25	20	20	1	0	
Engr.	16	2	2	1	0	

(a) Live Oaks engineering program was terminated after the first semester, 1974-75. The program was conducted in a "circuit rider" fashion with the instructor visiting the home schools.
(b) Scarlet Oaks business program was terminated after two weeks in 1974-75.

and teaching aids.[4] The funding listed above does not include any indirect costs nor does it include the funds provided to Kent State University for teacher education and evaluation.

Table 2 shows the average annual cost per student completing the pre-postsecondary program during 1974-75. It should be pointed out that

[4]Data obtained from contracts between Ohio Division of Vocational Education and Penta County JVSD, Great Oaks JVSD and Akron City Schools.

TABLE 2

MEAN COST PER STUDENT COMPLETING PRE-POSTSECONDARY PROGRAM DURING 1974-75

School	Mean Cost Per Student Completing
Penta (N=10)	$ 2,703.00
Great Oaks (N=13)	3,817.00
Akron City (N=22)	1,818.00
Mean Cost Per Student in JVSD's in 1974-75	1,625.00 (a)
Mean Cost Per Student in Pre-postsecondary Program	2,748.00

Source: Student completion data taken from Kent State Evaluation Report Fiscal Data taken from contracts awarded Penta County, Great Oaks and Akron City Schools by Ohio Department of Education.

(a) Data for this item obtained from "Cost per Pupil" publication of Ohio Department of Education.

eight (8) additional students participated to some extent in the program at Great Oaks. If these students had completed the program, the average cost would have been reduced from $2,748 to $2,200 per student.

One must also realize that new and experimental programs are usually more costly than on-going programs. However, student attrition contributed significantly to the relatively high per student cost. For example, if all students in the program in Spring, 1974 had completed the 1974-75 year, the cost per student would have been $1,282. High attrition rates would suggest a need to look at the content and organization of the program plus a need to look at the procedures used to select students for the program. One must conclude that the, approximately

50 percent attrition rate from the close of the junior to the close of the senior year seems inordinately high, even if one admits that there is utility in a student deciding that a given career area is not an appropriate choice for that individual and drops from the program. The Kent State study suggests that "in most cases, students did not wish to reenter a program that was in operation (in 1973-74) because of change in their priorities, rather than because of dissatisfaction with the program.[5] However, these data were based upon a very limited response to the students who "dropped" from the program. A cursory inspection of the data in Table 1 reveals that the health programs at all locations had less attrition of students than did the other programs.

Another dimension to be considered in the matter of attrition of students can be found in a comparison of the Kent State Evaluation findings at the close of the first year with the data available at the close of the second year. The Kent State Study reported that at the close of the first year, 80 percent (51 of 64 students) indicated they would definitely like to continue and only 20 percent indicated that they would not like to continue or expressed doubt about continuing.[6] At the close of the second year only 45 students completed the program. Thus, an additional six students or an additional 11 percent of the students indicating a desire to continue the program did not complete the program.

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[5]Pre-postsecondary Evaluation Report . . . op. cit.

[6]Ibid.

Interim Evaluation Report

This evaluation study completed by Kent State University in August, 1975 has been referred to previously. However, a brief outline of the recommendations contained in this report seems useful as a background for the current study. The following statement of conclusions and recommendations are taken directly from the Kent State study.

> The pre-postsecondary program (PPSP) appears to have resulted in general achievement comparable to a traditional high school curriculum, in addition to giving most of the students very valuable field experiences and specialized knowledge about their career areas. Consequently, the program should be considered successful from an educational perspective.
>
> Some of the locations of the program, however, proved to be more successful than others in terms of the implementation of the concept of the PPSP. For example, Penta and Scarlet Oaks were two locations in which students did spend a large block of time in their major area of concentration. Penta had a curriculum which the teachers followed; Scarlet Oaks did not. However, Scarlet Oaks appears to have had more valuable field experiences, and the entire set of materials provided for the students appears to have been relevant to their career choice. Also, activities were well integrated with academic content.
>
> Therefore, it appears that the most successful exemplification of the PPSP concept was presented by the Scarlet Oaks Health program. This does not mean, however, that the Scarlet Oaks program was perfect and could not have been improved. For example, it appears that the students in the program did not know as much about general United States' history as students in a traditional program. Since history is an important content area in high school curriculums, it appears that special efforts should be made to structure a PPSP in such a way that history is included. In addition, at Scarlet Oaks there was a tendency (nonsignificant) for the students to do less well in math than students in a traditional curriculum. In the Scarlet Oaks PPSP, programmed material was used to teach mathematics. Because mathematics is an integral part of a health program, an alternative method of teaching mathematics should be used.

General Recommendations

1. It is recommended that future implementation of the program involve the use of some sort of curriculum or at least a general plan. It appears that some

of the teachers were frustrated at the beginning of the program when they did not have a procedural guide or introduction to activities designed to meet program objectives.

2. It is also recommended that interested, talented teachers who are at least familiar with the general career area be recruited. It is highly improbable that one teacher will be equally talented in all subject areas, but a team of teachers should be able to provide the resources. Although teachers may regard meetings with a supervisor as a waste of time, meetings for information-giving and encouragement probably would be essential. All teachers should know what field experiences the students are participating in, and all the objectives of the other teachers. Also, teachers should have feedback on their progress in meeting program objectives.

3. The program should be highly publicized so that more students attempt to enter the program. The selection procedure for a field such as health (as it was implemented) should probably limit entrance to those students who are average and above average in achievement and who are interested in the general career area. Interviewing should probably be included as part of the selection procedure.

4. If the program is not held at a comprehensive high school in which all of the students in the program would already be enrolled, transportation problems of the students should be alleviated. Equipment necessities for the program should be specified by the team of teachers before program begins.

5. In general, the key to this program, as with almost any educational program, was the teacher(s). Skill at teaching and knowledge of content are requisites; however, in this program the interest and dedication of all teachers involved are also requisites. Probably this program should also involve at least one person, preferably the field-experience coordinator, who, in addition to carefully organizing field trips that eventually would be tailored to individual student interest, would also function as a counselor. Hopefully, if the program is held at a location other than thestudent's high school, this coordinator-counselor could also smooth over any administrative difficulties that arise. Most of the students in this program appear to be committed to some health or social science career. However, individualized guidance in some portions of the program appears to be essential, for the students were engaged in a "different" endeavor and anxieties arose. Some attempt at individual guidance is seen as being extremely important. A coordinator-counselor could provide this type of counseling.[7]

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[7] Ibid.

It must be emphasized that the above conclusions and recommendations have been taken verbatim from the Kent State Study. While not stated, it must be assumed that the comparison between Penta County and Scarlet Oaks involved only the health program.

II. DESIGN OF THIS STUDY

An exploration of patterns of postsecondary education is one of the functions of vocational education. After careful consideration, the Ohio Advisory Council for Vocational Education expressed a need for further information concerning the success or lack of success of the students who participated in the experimental pre-postsecondary curriculum in Ohio. Further, the Council felt this study should be conducted by the staff of the Council and authorized an appropriate budget for this research.[8]

Objectives

The following major objectives guided the conduct of this study:

1. To determine the extent to which students who had indicated a commitment to enrolling in postsecondary technical or professional education followed through with their intent.
2. To determine the level of success of the students who participated in the experimental program in their chosen postsecondary education venture and identify reasons for success or failure.
3. To obtain an appraisal by the students and instructors of the effectiveness of the pre-postsecondary program in

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[8] See minutes of the October 19, 1977 and January 12, 1978 meetings of the Ohio Advisory Council for Vocational Education.

preparing students for entrance into their educational program beyond high school.

4. To obtain suggestions from students and instructors for revisions of the pre-postsecondary education concepts which guided the pre-postsecondary program in which they were enrolled.

The original objectives for this study included an appraisal of the teacher education service program at Kent State University. This objective was eliminated from the study since only a few of the teachers available for interview in 1978 had participated in the Kent State University service program.

Population and Sample

The population for this study was designed to include all persons who had participated in the pre-postsecondary program. However, some modifications in the population were made. None of the participants from Clark Technical were included in the study since this program was conducted for only one year. In addition, it was not possible to obtain the names of students who participated in the business administration program at Scarlet Oaks. (This program was dropped after the first year.) This researcher did not receive any of the names of the participants in the pre-postsecondary program in the Akron City Schools. All responses for this school were obtained by having questionnaires sent by the local school officials. The inability of the researcher to contact the students directly resulted in a low rate of response for the Akron students.

Table 3 below describes the student population for this study:

TABLE 3

STUDENT POPULATION FOR PRE-POSTSECONDARY STUDY
BY SCHOOL AND PROGRAM AREA

School & Program Area	Students Spring 1974 N=91	Students Fall 1974 N=53	Students Spring 1975 N=45	Students Names Available N=81	Students Available for contact N=74	Students Responding N=47	% Response
Penta-							
Health	11	10	10	10	10	10	100
Great Oaks							
Scarlet-							
Health	19	12	10	11	8	8	100
Live-							
Soc. Sc.	16	5	3	15	12	12	100
Live-							
Engr.	4	4	(a)	4	3	3	100
Scarlet-							
Bus. Adm.	(b)	-	-	-	-	-	-
Akron							
Health	25	20	20	25	25	9	36
Engr.	16	2	2	16	16	5	31
TOTAL	91	53	45	81	74	47	64

(a) Live Oaks engineering program terminated end of first semester 1974-75.
(b) Scarlet Oaks business program terminated after one year.
(c) Percentage response is based upon member of students responding compared with number of students available for response.

In addition to the students included in the study, instructors, program coodinators and administrators were included in the study. Table 4 indicates the instructors and administrators included in the study by school.

TABLE 4

TEACHERS AND ADMINISTRATORS INCLUDED IN THE PRE-POSTSECONDARY STUDY BY SCHOOL

School	Instructors	Program Coordinators	Administrators
Penta County	4	1	1
Great Oaks	5	1	1
Akron	2	1	2 (a)
TOTAL	11	3	4

(a) Both the Director of Secondary Education and the Principal of Central Power High School were interviewed at Akron. The Superintendents were interviewed at Penta and Great Oaks.

Essentially, a census of available persons was included in this study.

Development of Data Collection Instruments

A separate instrument designed to answer the questions posed by the objectives of the study was designed for each respondent group. These instruments were developed in consultation with the Research and Evaluation Committee of the Ohio Advisory Council for Vocational Education and staff members of the Ohio Department of Education, Division of Vocational Education.

The instruments were evaluated after their initial use and found to be satisfactory.

Data Collection

The original design called for personal interviews with administrators, instructors and students. After the initial collection of data, it was agreed that collection of data from students could be effectively collected by a mail questionnaire with the researcher conducting personal interviews with the administrators and instructors. This general procedure was followed. However, a few of the instructors were contacted by mail and some follow-up with students was conducted by telephone.

Data Analysis

Since the basic design of this study was a descriptive survey, and since the respondents for this study constituted a census, only descriptive statistics were used to analyze these data.

III. FINDINGS OF THE STUDY

The findings of this study are presented in both statistical and narrative form. In addition, the general findings are presented as they are related to each of the four major objectives of the study. Another unit of this section presents the findings for each of the school districts participating in this experimental pre-postsecondary program.

A. General Findings

Enrollment of Students in Postsecondary Education

One of the critical measures of a program designed to prepare students for a postsecondary educational experience must be the extent to which the pre-postsecondary participants enrolled in postsecondary education.

Before presenting the statistical data, the researcher must again point out that approximately 50 percent of the students "dropped" from the program between the close of the junior year and the close of the senior year.

Table 5 presents the data for postsecondary education enrollment. It is clear from these data that there was a variation in the percentage of students enrolling in postsecondary education. The Penta health program and the Live Oaks engineering program had 100 percent of the respondents who enrolled in postsecondary education. All fourteen (14) respondents from Akron enrolled in postsecondary education, but only about one-third of the Akron students responded to the questionnaire.

One must indicate that while a high percentage of these students enrolled in postsecondary education, this was presumably a select group. It would not seem unreasonable to expect over 90 percent of these students to pursue postsecondary education. The data show that those students completing the pre-postsecondary program did, in fact, pursue postsecondary education.

Another dimension of this evaluation was to look at the number of students who enrolled in postsecondary education in the same area of study as their special area of pre-postsecondary study.

Table 6 presents the statistical data related to this topic.

While a high percentage of the students in the pre-postsecondary program did enroll in postsecondary education, there were from one-third to three-fourths of the pre-postsecondary students who did not enroll in the same area as the special area of pre-postsecondary study.

TABLE 5

ENROLLMENT IN POSTSECONDARY TECHNICAL OR PROFESSION EDUCATION BY PARTICIPANTS IN PRE-POSTSECONDARY PROGRAM COMPARED BY SCHOOL AND PROGRAM AREA

School and Program Area	Enrollment in Postsecondary Education			
	Yes		No	
	No.	%	No.	%
Penta - Health (N=10)	10	100	0	0
Great Oaks				
Scarlet - Health (N=8)	5	63	3	37
Live - Soc. Science (N=12)	8	67	3	33
Live - Engr. (N=3)	3	100	0	0
Akron City				
Health (N=9)	9	100	0	0
Engr. (N=5)	5	100	0	0
TOTAL	40	85	7	15

TABLE 6

STUDENTS POSTSECONDARY EDUCATION AREA COMPARED WITH SPECIAL PRE-POSTSECONDARY AREA OF STUDY BY SCHOOL AND PROGRAM AREA

Pre-postsecondary Special Area	Postsecondary Area of Study			
	Same		Different	
	No.	%	No.	%
Penta - Health (N=10)	7	70	3	30
Great Oaks				
Scarlet - Health (N=5)	3	60	2	40
Live - Soc. Science (N=8)	2	25	6	75
Live - Engr. (N=3)	2	67	1	33
Akron City				
Health (N=9)	4	44	5	56
Engr. (N=5)	3	60	2	40
TOTAL (N=40)	21	53	19	47

While one is likely to react with concern about this change in educational direction, one must keep in mind that one of the purposes of the pre-postsecondary program was to provide an in-depth experience for the student in a special field. Deciding not to pursue a career in a special field can be a valid outcome of a pre-postsecondary educational experience.

Perceived Level of Success in Postsecondary Education by Pre-postsecondary Students

A second objective of this study was to determine the level of success of the students who participated in the pre-postsecondary program in their chosen postsecondary education venture. This measure was, of course, a measure of the students own perception of their level of success.

Table 7 presents the data related to the students perception of their level of success in postsecondary education. In general, the students felt they were moderately to highly successful. Only two (5%) of the students indicated they were not successful. This would indicate that those pre-postsecondary students who actually enrolled in post-secondary education felt they had been rather highly successful in their postsecondary education.

Status of Students Not Pursuing Postsecondary Education

Table 8 shows the data describing the status of students who did not pursue postsecondary education.

None of the student respondents who participated in the pre-postsecondary program were unemployed. Three of the students planned to enroll in postsecondary education next year and four were employed.

Appraisal of Effectiveness of Pre-postsecondary Program

Both the students and the instructors who participated in the pre-postsecondary program were asked to appraise the effectiveness of the program.

TABLE 7

STUDENTS PERCEPTION OF SUCCESS WHILE PURSUING POSTSECONDARY EDUCATIONAL PROGRAMS BY SCHOOL AND PROGRAM AREA

Schools & Program Area	Highly Successful		Moderately Successful		Not Successful	
	No.	%	No.	%	No.	%
Penta						
Health (N=10)	6	60	3	30	1	10
Great Oaks						
Scarlet - Health (N=5)	4	80	1	20	0	0
Live - Soc. Sc. (N=8)	6	75	1	12.5	1	12.5
Live - Engr. (N=3)	3	100	0	0	0	0
Akron City						
Health (N=9)	6	67	3	33	0	0
Engr. (N=5)	3	60	2	40	0	0
TOTAL	28	70	10	25	2	5

TABLE 8

STATUS OF STUDENTS NOT PURSUING POSTSECONDARY EDUCATIONAL PROGRAMS BY SCHOOL AND PROGRAM AREA

School and Program Area	Plan to Enroll in Post Sec. Educ. next year		Employed		Not Employed & Do Not Plan To Enroll	
	No.	%	No.	%	No.	%
Penta						
Health (N=0)	N/A	-	N/A	-	N/A	-
Great Oaks						
Scarlet-Health (N=3)	2	67	1	33	0	-
Live - Soc. Sc. (N=4)	1	25	3	75	0	-
Live - Engr. (N=0)	N/A	-	N/A	-	N/A	-
Akron City						
Health (N=0)	N/A	-	N/A	-	N/A	-
Engr. (N=0)	N/A	-	N/A	-	N/A	-
TOTAL (N=7)	3	43	4	57	0	-

Table 9 shows the statistical data for the students perception of whether or not the pre-postsecondary experience was helpful in their postsecondary education. (Only those students pursuing postsecondary education in an area related to their pre-postsecondary study were included in this analysis.) The data clearly show that these students felt the pre-postsecondary program was helpful.

Table 10 presents the instructors perception of the effectiveness of the pre-postsecondary program. While almost three-fourths of the instructors felt that the program was effective, slightly more than one-fourth were ambivalent about the effectiveness of the program. None of the instructors felt the program was ineffective.

These data show that both students who participated in the program and later participated in postsecondary education and the instructors felt the pre-postsecondary program was helpful and effective.

It was noted that students appeared to recognize that colleges would teach the academic courses in a segmented fashion and appeared concerned that the intergrated approach in the pre-postsecondary program would not prepare them to succeed in college.

Instructors Perception of Contribution of Pre-postsecondary Program to Postsecondary Education

The instructors in the pre-postsecondary program were asked to indicate the contributions made by the pre-postsecondary program to the postsecondary education of the students. Table 11 indicates the responses of the instructors.

TABLE 9

PERCEPTION OF PRE-POSTSECONDARY PROGRAM BY PARTICIPANTS PURSUING RELATED POSTSECONDARY EDUCATION BY SCHOOL AND PROGRAM AREA

School & Program Area	Students Helped by PPSP		Students not Helped by PPSP	
	No.	%	No.	%
Penta				
Health (N=7)	6	86	1	14
Great Oaks				
Scarlet - Health (N=3)	3	100	0	0
Live - Soc. Sc. (N=2)	2	100	0	0
Live - Engr. (N=2)	2	100	0	0
Akron City				
Health (N=4)	3	75	1	25
Engr. (N=3)	1	33	2	67
TOTAL (N=21)	17	81	4	19

TABLE 10

PERCEPTION OF PRE-POSTSECONDARY PROGRAM BY INSTRUCTORS IN THE PROGRAMS BY SCHOOL

	Effective		Neither Effective Nor Ineffective		Not Effective	
	No.	%	No.	%	No.	%
Penta (N=4)	3	75	1	25	0	0
Great Oaks						
Scarlet		100	0	0	0	0
Live	0	0	2	100	0	0
(combination)	1	100	0	0	0	0
Akron City	2	100	0	0	0	0
TOTAL	8	73	3	27	0	0

TABLE 11

INSTRUCTORS' PERCEPTION OF CONTRIBUTION OF SPECIAL AREA OF PRE-POSTSECONDARY STUDY TO PREPARATION OF STUDENTS FOR POSTSECONDARY EDUCATION

Specific Contribution	No. Indicating
1. Helped students make career choice	5
2. Students indicated program was helpful	2
3. Students were required to be responsible for their actions	2
4. Students knew instructors well	1
5. High interest in special field	1
6. Both students could proficiency some college courses	1
7. Varied - some highly stimulated - some turned off	1
8. Some students would not have been successful in traditional program	1
9. Very effective education	1
10. Good preparation for postsecondary study	1

In general, the instructors felt that the primary contribution of the program was in helping the students make a career choice. While the instructors were generally positive toward the program, it should be noted that the instructors for the special area were much more enthusiastic about the program than instructors in the traditional academic areas.

Specific Elements of Pre-postsecondary Program Most Helpful to Students

Respondents were asked to indicate the specific elements of the pre-postsecondary program that was most helpful to them in pursuing post-secondary education.

Table 12 indicates the responses of the students who actually pursued postsecondary education.

The students felt that an opportunity to explore a special area (such as engineering, health or social science) as a part of the pre-postsecondary program was most helpful. The opportunity to have a "hands-on" experience also rated high with the students.

Students were also asked to indicate specific elements in the pre-postsecondary program that were not helpful as they pursued postsecondary education. Table 13 shows the results of the student responses. There was no consistent theme in the responses of the students. However, we can interpret that some of the students missed the standard, separate, academic courses in mathmatics, english and foreign language.

TABLE 12

SPECIFIC ELEMENTS IN PRE-POSTSECONDARY PROGRAM HELPFUL TO STUDENTS PURSUING POSTSECONDARY EDUCATION

Specific Element	No. Indicating
1. Specialized courses were helpful	11
2. Career exploration and field experience	7
3. Studies in psychology	3
4. Laboratory experience	2
5. Responsibility require of any individual	1

TABLE 13

SPECIFIC ELEMENTS IN PRE-POSTSECONDARY PROGRAM NOT HELPFUL TO STUDENTS PURSUING POSTSECONDARY EDUCATION

Element	No. Indicating
1. Missed out academically as far as college preparation	1
2. Teachers didn't teach math, english, and social science materials well	1
3. Lack of foreign language	1
4. Courses in geography	1
5. No opportunity to continue music	1
6. Social studies (for engineering students) not helpful	1
7. Mathmatics was not helpful	1
8. Second year was "Stifled" with loss of _____ (instructor)	1
9. More comprehensive study of physics	1
10. Not enough independent study	1

Suggestions by Instructors and Students for Improving Pre-postsecondary Program in Specific Areas

(a) Program Content

Table 14 indicates the suggestions made by instructors and students to improve the pre-postsecondary program content.

In general, the instructors who responded felt the program was excellent. They did suggest more "hands-on" experience. The students also stressed more "hands-on" experience as well as more emphasis on academic subjects and more independent study.

TABLE 14

SUGGESTIONS FOR IMPROVING PRE-POSTSECONDARY PROGRAM CONTENT

Instructors (N=11)	Students (N=47)
1. Program was excellent (N=4)	1. Emphasize "hands-on" experience (N=5)
2. Need more "hands-on" experience (N=2)	2. First year fine--second year disappointing because of change in instructors (N=3)
3. More stress on writing (N=1)	3. More emphasis on individual study (N=3)
	4. More emphasis on academic studies (N=3)
	5. More difficult courses to prepare for college (N=2)
	6. More emphasis on chemistry and math (N=2)
	7. Don't see how program could be improved (N=2)
	8. Too much English (N=1)
	9. Program should be in home high school not JVSD (N=1)
	10. More writing experience (N=1)
	11. More specialized courses (N=1)
	12. More courses in area of major interest.

(b) Program Organization

Table 15 indicates the instructors and students suggestions for improving program organization.

Instructors urged a unified program. This was also suggested by a sizable segment of the students. However, it is clear that a sizable block of students continued to prefer separate courses. Since one of the basic concepts underlying the pre-postsecondary program was the development of a unified program, it seemed that some students and even a few of the instructors believe that pre-postsecondary program should follow the postsecondary model and teach separate, distinct courses and hold the students responsible for integrating the content into the professional education areas.

(c) Program Operation

Students and instructors were invited to present suggestions for improving the operation of the pre-postsecondary program. After analyzing the responses, it was apparent that suggestions in this area could be most usefully listed under either program content or program organization. Thus, no specific suggestions are listed for improving program operation.

(d) Changes in Level of Difficulty of Program

Table 16 shows the reaction of students and instructors regarding changes in level of difficulty of the program.

The students seemed to feel the level of difficulty was "about right." However, there was a sizeable number who felt the program should be more rigorous. There was no general indication from the students that the program was too rigorous.

TABLE 15

SUGGESTIONS FOR IMPROVING PRE-POSTSECONDARY PROGRAM ORGANIZATION

Instructors (N=11)	Students (N=47)
1. Develop a unified program (N=3)	1. Unified courses most desirable (N=10)
2. Program would be better in a comprehensive high school (N=2)	2. Separate courses best (N=9)
3. Hold separate courses	3. Excellent organization (N=7)
4. Program needed more focus	4. Vocational school environment not desirable for program (N=2)
	5. What organization? (N=2)
	6. Academic phase should be better organized.
	7. More independent study

The instructors did not react in substantial numbers to this question.

TABLE 16

SUGGESTIONS FOR MODIFYING LEVEL OF DIFFICULTY OF PRE-POSTSECONDARY PROGRAM

Instructors (N=11)	Students (N=47)
1. Make program more rigorous (N=1)	1. About right for level of difficulty (N=18)
2. About right (N=1)	2. Could have been more rigorous (N=12)
	3. Math was over my head (N=1)

(e) Teacher Preparation

Table 17 shows the suggestions of both teachers and students regarding teacher preparation for the program. Teachers tended to stress the need for subject matter competence. The students were almost evenly divided in indicating that teacher preparation was quite satisfactory and the fact that teacher preparation needed improvement. The fact that over one-fourth of the students responding felt there was a need for improved teacher preparation seems to be an important finding. One must keep in mind that the student respondents in this study were primarily those who completed the program and who pursued postsecondary education.

TABLE 17

SUGGESTIONS FOR IMPROVING TEACHER PREPARATION PROGRAM FOR PRE-POSTSECONDARY PROGRAM

Instructors (N=11)	Students (N=47)
1. Must know subject matter well (N=3)	1. Teacher preparation needed improvement (N=12)
2. More emphasis on objective development (N=1)	2. Teacher preparation was quite satisfactory (N=10)
3. Teacher selection more important than preparation (N=1)	3. Teachers needed to show more interest (N=2)
	4. Needed math teacher instead of programmed math (N=1)
	5. Mrs. _____ was fantastic (N=1)

(f) Nature of Students Enrolled in Program

Table 18 shows the suggestions made by teachers and students about the nature of the students enrolled in the pre-postsecondary program.

Teachers indicated a need for more effective screening and selection of students. This was supported by a sizeable number of the student respondents. However, an equal number of the students felt the screening process was satisfactory.

TABLE 18

SUGGESTIONS FOR CHANGES IN THE NATURE OF STUDENTS ENROLLED IN THE PRE-POSTSECONDARY PROGRAM

Instructors (N=11)	Students (N=47)
1. Need more effective screening and selection of students (N=4)	1. Selection process was OK (N=8)
2. Need more homogeneous group (N=1)	2. Students need to be more carefully screened (N=8)
	3. All students should be interested (N=7)
	4. Students must be mature (N=2)
	5. Quite a drug problem among the students (N=1)

In general, students suggested more "hands on" experience, were divided as to whether or not the program should be unified or separate courses, felt the program was "about right" in terms of level of difficulty and felt the teachers needed better preparation.

The instructors felt a need for more "hands on" experience, urged a unified program, and felt the teachers should have a strong subject matter base.

B. Program Summary By Schools

In addition to presenting the findings obtained by mail questionnaires from students and contacts with the instructors, it seemed important to outline the program as conducted at each of the schools along with the reaction of the administrators at each location. An analysis of the program has been made for each school.

1. Akron City Schools - Pre-postsecondary Program

The original group of students in the pre-postsecondary program in Akron involved approximately forty-one (41) students. The program is called "Career Exploration For The College Bound."

This program began in 1973 at Firestone High School. Firestone, normally has about 80 percent of its high school graduates entering college. In November, 1973 a suit was filed in the United States District Court (Northern District of Ohio, Eastern Division) challenging the pre-professional education program initiated by the Akron Board of Education. On July 1, 1974, the Akron Board of Education agreed to terminate the "Pre-postsecondary Professional Cluster Program in Health and Engineering" at Firestone High School after the 1974-75 academic year. This would permit those enrolled in the program to complete it.

The Akron City Schools staff, under the leadership of Mr. Tenney, felt the concepts of the pre-postsecondary program were so important that they developed a revised program and placed the program at Central-

Hower High School. The program at Central-Hower was available to any student in the Akron City School System.

Akron Central Hower High School is a new facility, completed in 1976, which stands on the site of Akron's first high school, built in 1884.

The Central-Hower career exploratory program blends academic study and experience in six career clusters. The program has been skillfully designed to prepare students for college by providing strong academic background as well as practical experience in a career of their choice.

Tenth year students enrolled in the career exploratory program are given an opportunity to survey the offerings of at least four of the six available career clusters before choosing a cluster for more intensive study in the junior and senior years.

Career Exploration in the junior and senior years involves a three period block of time in which students cover two academic subjects and participate in field experiences in their career cluster. Should an extended field experience encroach upon time allotted to the day's schedule of classes, that time is made up later, so that a balanced program of studies may be maintained by every student. Each student also has an additional five periods in which to take other required academic courses and elective courses such as higher math, English, advanced foreign languages, advanced science, creative arts, dramatics, music and humanities.

The six available career clusters include the following:

Business Administration and Management (Business and English)

This cluster focuses on the skills for a successful business operation. It promotes an appreciation of the role of business in our economy and provides insights into the many associated career fields including: accounting, advertising, public relations, auditing, banking, computer programming, insurance and purchasing. Field experiences might include: accounting offices, financial institutions, insurance agencies, personnel offices, retail stores, rubber corporations and small businesses.

Communicative Arts (English and Speech)

This cluster encompasses the gamut of communication, from interpersonal exchange to the mass media. It encompasses the range of all kinds of careers involved in message sending examining both the technical and artistic aspects of these careers. Field trips to advertising agencies, film production centers, newspaper publishers, photography studios and TV and radio stations and practical experiences with professionals in the media field promote the student's knowledge of a chosen field.

Engineering and Math (Science and Math)

Basic skills in science and mathematics combine with practical activities and field experiences to give the student definite knowledge of the operations of a specific profession. Extended contacts with professionals are arranged. A student may enroll in advanced courses in related areas at the University of Akron.

Medicine and Health (Science and Math)

Science and mathematics are basic studies in this cluster, as in engineering and math, with emphasis on their application to careers in this field of exploration. Opportunities in medicine, osteopathy, dentistry, veterinary medicine, pharmacy, nursing, dietetics, and medical technology are explored. Through association with professionals in the scientific community, students sharpen their awareness of specific careers in their chosen field.

Performing Arts (English and Drama)

Theatre, music and dance are explored, with field experiences to provide exploration of careers behind the scenes as well as the glamour of performance before the audience. The University of Akron's ballet school and the E. J. Thomas Performing Arts Hall are accessible for experiences with scenery design, costuming, lighting, and set construction. Students may also relate to local little theatre groups and learn of opportunities in the performing arts.

Social Sciences (Social Studies and English)

A wide range of diversified careers in this field provides opportunities for student volunteer work in a variety of settings - churches, hospitals, schools, libraries, or social agencies. The resources of local political groups provide many speakers as well as opportunities for student involvement in city council committees or work in the Mayor's Office.

Advisory groups of professionals in each career cluster meet with students and instructors to answer career questions and organize exploration experiences at their place of employment.

The "Career Exploration Program" has enrolled approximately one-hundred (100) students per grade at Central-Hower. Over two hundred (200) students have now graduated from the program.

In 1978 there were one hundred fifty (150) students in each of the 10th, 11th and 12th grades. The program starts in the tenth (10th) grade with a pre-career program and is essentially a "guidance"program. The tenth grade students spend one period per day in one of the clusters for six weeks. The second, third and fourth six-weeks the student explores one of the other clusters. The student then returns to the area of his choice for the last twelve weeks.

Career Exploration is not an "elitist" program. Students must be interested in pursuing post secondary study to enroll. Students are not selected by grades. However, students must have basic competence to pursue career area selected. Enrollment in Career Exploration programs runs the full gamut from 99 percentile to the first percentile.

Some specific thoughts expressed by Akron City School Administrators were:

(1) Teacher selection is very important.

(2) Teachers do not understand career exploration program at first.

(3) In-service Training is very important.

(4) Grades are not an important criterion in selection students for the program. Interest in study beyond high school is important. Students must have basic skills.

(5) Student attendance is high and vandalism is low in this program.

(6) Parents react very favorably to the program.

(7) Career Exploration has more application to potential careers but is just as rigorous as traditional programs.

(8) Special facilities are not required for career exploration.

(9) Career Exploration has led to a revision of the college preparatory curriculum.

(10) Teachers spend about six weeks in the summer developing curriculum materials.

(11) A coordinator of field experiences is necessary.

(12) Teachers are developed through in-service education rather than through college courses.

Summary

Career Exploration program has made education as it should be. Preparation for the next step. Career Exploration puts philosophy and goals together.

This program can be available in all high schools. The academic programs are related real life. The program is integrated.

A new program will begin next year at Buchtel University High School. There will be seven clusters of related careers. It is anticipated that there will be 700 enrolled in Career Exploration at Buchtel. Thus, there will be a total of 1,200 students enrolled each year in Career Exploration in the Akron Schools.

The following generalizations can be made about the Akron City School Pre-postsecondary Program:

1. Administrators, coordinators, principals and teachers involved in the Akron program were enthusiastic about the program.
2. The pre-postsecondary program has led to the development of a strong Career Exploration Program at Central-Hower and a program planned for Buchtel University High School next year.
3. There is a commitment to integrating theory and practice--academic programs and real life experiences.
4. The Akron City Schools make Career Exploration available to a broad range of persons. It is not highly selective.

It is quite clear that the residual effect of the pre-postsecondary program in the Akron City Schools is very great. The modest seed funds granted for the experimental program have made a significant change in the curriculum of the schools.

2. Penta County - Owens Tech Pre-postsecondary Program

A unique dimension of the pre-postsecondary program at Penta County was the fact that the entire program was conducted at and instruction was provided by faculty of Owens Technical College. (Owens Tech is located immediately adjacent to Penta County. Both institutions are located on the old Rossford Arsenal property.) This arrangement meant that junior and seniors in high school were placed in a postsecondary institution. While the pre-postsecondary students remained together as a group through the two years of the program, there was some interaction with postsecondary students in a postsecondary setting.

Supt. Kingsley was not directly involved in the pre-postsecondary program but did provide important information about the program. He was most supportive of the program and indicated that Owens Technical College assumed responsibility for the program through a contractual arrangement with Penta County JVSD.

Supt. Kingsley indicated that there were no significant problems in conducting the program. He stressed that close liaison with the home school was very important. Also, a commitment from the home school superintendent was essential. The impact on the home school calendar and the impact upon transportation were factors to be considered.

Dr. Michael P. Roetter at Owens Technical College served as coordinator of the pre-postsecondary program. He was most enthusiastic about the program. He indicated that selecting effective teachers was a critical dimension in developing an effective pre-postsecondary program. Teachers needed to have an excellent subject matter background but also needed to be innovative in their approach to teaching. A unified, integrated curriculum was the goal toward which the program at Penta was directed.

One problem pointed out was that the late notification of funding for this program made it difficult to do an effective job of selecting students into the program.

Mr. Albert Siekeres served as the primary instructor for the group in the specialized field. This specialized field was health careers with the subject matter content primarily in the areas of biology, physics and chemistry.

Mr. Siekeres was extremely supportive of the pre-postsecondary concept. He supported the concept of an integrated curriculum. He emphasized that this program really wasn't a vocational program but was a strong academically oriented, college preparatory program. He felt that the "hands on" experience was less than the Division of Vocational Education desired. However, he strongly supported the academic approach.

Three additional academic instructors were interviewed about the program. There was a mixed but generally favorable reaction to the program by these instructors. Instructors would have preferred a more homogeneous grouping of students. They felt that there had not been adequate screening of applicants for the program, although they agreed that the students were above average in ability. Instructors indicated they taught their subjects at the "college level."

The following generalizations can be made about the Penta County-Owens Technical College Program:

1. There was a high retention rate of students in the program. Ten of the eleven students who began the program completed two years.
2. As the data indicate, all of the ten students completing this program enrolled in postsecondary educational experience.
3. This program had a very strong academic orientation with corresponding less attention given to "hands on" experience.
4. There was little or no association with vocational education in this program including the instructors and physical facilities. It would seem this program could have been conducted just as effectively in any of the 26 technical and community colleges in the State of Ohio.

While it was not possible to investigate this matter in depth, it did not appear that the pre-postsecondary program had produced any significant residual effect within the JVSD.

3. Great Oaks JVSD - Pre-postsecondary Program

The pre-postsecondary programs initiated at Great Oaks JVSD included the following locations and specialized areas:

Scarlet Oaks	-	Health
Scarlet Oaks	-	Business
Live Oaks	-	Social Science
Live Oaks	-	Engineering

Only the Scarlet Oaks - Health and the Live Oaks - Social Science were conducted for the full two years. The Scarlet Oaks - Business terminated after one year and the Live Oaks - Engineering terminated after the first semester of the second year.

At the close of the first year, there were 39 students in the pre-postsecondary program at Great Oaks. However, at the close of the second year, there were only 13 students in the program. In other words, two-thirds of the students dropped from the program during the second year.

Dr. Harold Carr, Superintendent of Great Oaks JVSD provided some most perceptive comments about the pre-postsecondary program. In general, he felt that students found it very difficult to integrate theory and practice in a field. However, the key to success is the students ability to integrate. He felt this program helped put the fragments of education together in an integrated field.

Effectiveness of the teachers determine the effectiveness of the program. The teacher needs to have broad experience in a subject matter field and needs to have demonstrated performance as a teacher. In general, there is not enough depth in a single teacher to perform this task. There is a need for team teaching in this type of program. Dr. Carr felt there would be more acceptance if this type program were conducted in a separate pre-postsecondary building.

Dr. Carr felt there was a need to interview and carefully select students into such a program. He also, felt there was not sufficient "lead time" to prepare home schools for acceptance of this program. Thus, the support from the home schools was not as strong as was desired.

The program coordinator and five instructors responded with comments about the program. In general, these teachers indicated they felt the program was moderately effective.

It is quite clear from the student comments that one instructor in the second year of one program was not perceived as effective. This instructor was no longer in the system and could not be contacted. It seems clear that this instructor contributed to the high attrition rate in one program in the second year of the program.

The following statements seem to summarize the pre-postsecondary programs at Great Oaks JVSD:

1. Strong emphasis was placed on integrating theory and practice, academic and "hands on" experience. More emphasis was placed in occupational field experience at this location than at other locations.

2. Student respondents in this study were quite favorable toward the program. Even students who had not completed the program were generally favorable. (Keep in mind that a number of the dropouts could not be contacted.)
3. The attrition rate from the end of the first year to the end of the second year was 66.7 percent which appears to be very high.
4. The cost per student completing the program was more than double the cost of the average cost per student in a JVSD for the same year. (Attrition contributed to this high cost.)
5. Teacher selection was a problem in some areas. In some cases the academic teachers were "borrowed" from home schools.
6. Only about two-thirds of these students responding indicated they had enrolled in postsecondary education.

While it was not possible to investigate the impact of this pre-postsecondary program in the home schools, it did not appear that there was any significant residual effect from the program in the JVSD.

IV. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This final section of this research report will present in succinct fashion a summary of the research objectives, the research methodology, the findings, conclusions and recommendations.

Objectives

The following four objectives guided this study:

1. To determine the extent to which students who had indicated a commitment to enrolling in postsecondary technical or professional education followed through with their intent.
2. To determine the level of success of the students who participated in the experimental program in their chosen postsecondary education venture and identify reasons for success or failure.
3. To obtain an appraisal by students and instructors of the effectiveness of the pre-postsecondary program in preparing students for entrance into their educational program beyond high school.
4. To obtain suggestions from students and instructors for revision of the pre-postsecondary education concepts which guided the pre-postsecondary program in which they were enrolled.

Research Methodology

The population for this study included all students and instructors who had participated in the pre-postsecondary program in 1974-75, at Penta County JVSD, Great Oaks JVSD and Akron City Schools. The superintendents at the JVSD's and the Director of Secondary Education at Akron City Schools were also included. In view of the small numbers involved, no sample was drawn.

Mail questionnaires were received from 47 students (64%). Responses were obtained from 11 instructors, three program coordinators and four administrators.

The researcher visited each school and personally interviewed the administrators, program coordinators and most of the instructors. Some instructors were contacted by telephone and by mail.

All students received a mail questionnaire. In addition, non-respondents were contacted by telephone at Penta County and Great Oaks, JVSD. In each of these locations, 100 percent of the persons available responded. (Some students had moved with no forwarding address.) However, at Akron City Schools, the researcher was not provided with names of the students but provided the Akron School Administration with questionnaires, return stamped envelopes and instructions for contacting the students. Only a one-third response was received from the Akron students.

Findings

The findings presented below are drawn from the data collected at all schools involved in the pre-postsecondary program as well as data provided by the contracts with the Division of Vocational Education, Ohio Department of Education and the Kent State Interim Evaluation Report.

(a) Cost per student

The cost per student completing the pre-postsecondary experimental program ranged from $1,817 per student at Great Oaks to $1,818 per student in Akron City Schools. The mean cost per student completing the program in all schools was $2,748. This can be compared with a mean cost per student in JVSD's in 1974-75 of $1,625.

Student attrition contributed signifcantly to the relatively high per student cost.

(b) Student Attrition in the Program

A total of 91 students completed the first year of the experimental pre-postsecondary program. Only 53 students started the second year of the program and of these 53

students, only 45 completed the second year. Thus, over 50 percent of the students completing the first year of the program did not complete the second year.

One must conclude that the attrition rate described above seems inordinately high, even if we admit that there is utility when a student decides not to pursue a given career and drops from the program.

(c) Extent to Which Pre-postsecondary Students Enrolled in Postsecondary Education

A critical measure of the success of a pre-postsecondary program must be the extent to which the students participating in the program enrolled in postsecondary education. Another dimension which is a measure of success if the degree to which the students in the pre-postsecondary program enrolled in the same area of study as their special area of pre-postsecondary study.

The data show that those students completing the pre-postsecondary program did, in fact, pursue postsecondary education.

While a high percentage of the students in the pre-postsecondary program enrolled in postsecondary education, only about 50 percent of those students enrolled in the same areas as their special areas of pre-postsecondary study.

(d) Perceived Level of Success in Postsecondary Education by Pre-Postsecondary Students

The pre-postsecondary students who actually enrolled in post-secondary education felt they had been rather highly successful in their postsecondary education.

None of these student respondents who had participated in the program were unemployed. Several (3) students planned to enroll in postsecondary education in 1978-79.

(e) Appraisal of Effectiveness of Pre-postsecondary Program

Both students and instructors were asked to appraise the effectiveness of the pre-postsecondary program.

Students quite clearly felt they were helped by the program (81% felt they were helped).

Instructors also felt the program was effective (73%), although slightly more than one-fourth (27%) were ambivalent about the program.

In general, the instructors felt that the major contribution of the program was in helping the students make a career choice.

Instructors for the special area (i.e., health, engineering) were more enthusiastic about the program than were the instructors in the traditional academic areas (i.e., math science).

Students, too, felt that the opportunity to explore a special area was most helpful. The opportunity to have a "hands on" experience also rated high with students.

There was no consistent pattern to the students responses regarding areas of the pre-postsecondary program that <u>were not</u> helpful. Some students missed the standard, separate, academic courses in mathematics, English, and foreign languages

and were concerned that they would be at a disadvantage in postsecondary education without these courses.

(f) Suggestions by Students and Instructors for Improving the Pre-postsecondary Program

Many specific suggestions were made by students and instructors for the improvement of the pre-postsecondary program.

In general, students suggested more "hands on" experience, were divided as to whether or not the program should be unified or separate courses, felt the program was "about right" in terms of level of difficulty, suggested more careful selection of students and felt the teachers needed better preparation.

The instructors felt a need for more "hands on" experience for the students, urged a unified program, suggested more careful screening and selection of students and felt the teachers should have a strong subject matter base.

(g) Residual Effect Upon Participating Schools

While this factor was not explored in depth, it seemed that the residual effect of the experimental pre-postsecondary program was significantly greater in Akron City Schools than in the other schools. Three years after the completion of the experimental program, Akron City Schools were not only continuing but were expanding the program.

CONCLUSIONS

The following conclusions are set forth based upon the findings of this study:

1. An effective and fiscally efficient pre-postsecondary program requires careful screening and selection of participants. While an experimental program usually is more costly than established programs, student attrition from the program contributed greatly to high per student cost.
2. Students completing the pre-postsecondary program did pursue postsecondary education.
3. Students completing the pre-postsecondary program tended to pursue postsecondary areas of study other than the special areas studied in the program about as often as they pursued the special areas.
4. Students and instructors perceived the pre-postsecondary program as an effective preparation for postsecondary education.
5. Instructors and students agreed that the most important outcome of a pre-postsecondary program was in helping students make a career choice.
6. The opportunity for a "hands on" experience for students rated high with both instructors and students.
7. Students felt the pre-postsecondary program could be improved by providing more "hands on" experience, by keeping the program quite rigorous, by more careful screening and selection of students and by better preparation by teachers.

8. Instructors felt a need for more "hands on" experience for students, urged a unified program and more careful screening and selection of students.

Recommendations

1. The Division of Vocational Education should cooperate with the Division of Secondary Education, Ohio Department of Education to modify existing "college preparatory" programs so that substantive amounts of "hands on" experience will be provided.
2. The Division of Vocational Education should continue to emphasize "career exploration" as a part of the Career Education and Vocational Education programs.
3. If the Division of Vocational Education should fund another experimental pre-postsecondary program, sufficient lead time should be provided so that effective student screening and selection could be accomplished.
4. If future experimental pre-postsecondary programs are conducted, a study should be made of the reasons students "drop" from such a program.

APPENDIX

Questionnaires

QUESTIONNAIRE 1 - SUPERINTENDENT

If you will be willing to provide information about your involvement in this experimental program, it will be very useful to people who are planning programs to help Ohio high school students prepare for postsecondary studies and, eventually, jobs which are rewarding to them. All information you provide will be kept strictly confidential and will be used only as a part of total and average responses from all who participated in this study. You will be provided a summary of this information from all participants.

1) NAME _____ TELEPHONE _____

ADDRESS _____

2) SCHOOL DISTRICT _____

3) HIGH SCHOOL (s) IN WHICH PROGRAM WAS CONDUCTED:

_____

_____

4) CHARACTERISTICS YOU SOUGHT IN TEACHER (s) SELECTED: _____

a) Experience: _____

b) Record of Performance _____

c) Specialized training _____

d) Willingness to innovate _____

e) Other (explain) _____

f) Other (explain) _____

COMMENTS: _____

_____

5) CHARACTERISTICS YOU SOUGHT IN STUDENTS ENROLLED: _____

a) Maturity _____

b) Grades _____

c) Interest _____

d) Willingness to face challenges _____

e) Other (explain) _____

f) Other (explain) _____

COMMENTS: _____

_____

6) WERE STUDENTS ENROLLED ABOVE AVERAGE? _____ AVERAGE? _____

BELOW AVERAGE? _____ in terms of past grades?

7) What are some of the most important problems superintendents face in establishing such special areas of study?

a) Disruption of schedules of teachers: _____

b) Disruption of schedules of students: _____

c) Financial dislocations: _____

d) Parental concerns: _____

e) Student load inbalances: _____

f) Other (explain) _____

g) Other (explain) _____

COMMENTS: _____

_____

8) In your judgment, how can improvements be made in such special aren of study with respect to:

a) Teacher preparation? _____

_____

b) Course Organization? _____

_____

c) Rigor of course content? _____

_____

d) Providing physical facilities? _____

_____

e) Student selection? _____

_____

f) Financing? _____

_____

COMMENTS: _____

_____

In behalf of the Ohio Advisory Council for Vocational Education, I sincerely thank you for the information you have provided.

QUESTIONNAIRE 2 - INSTRUCTOR

In you will be willing to provide information about your involvement in this experimental program, it will be very useful to people who are planning programs to help Ohio high school students prepare for postsecondary studies and, eventually, jobs which are rewarding to them. All information you provide will be kept strictly confidential and will be used as a part of a total and average responses from all who participated in this study. You will be provided a summary of this information from all participants.

1) NAME _____ TELEPHONE _____

ADDRESS _____

2) Name of secondary school in which you conducted special area of study:

_____

3) Special area of study _____

4) Number of students you taught in this special area of study _____

5) To your knowledge, how many of these students have pursued (or are not pursuing postsecondary studies?

_____

6) How many in closely related fields? _____

7) How many in somewhat related fields? _____

8) How many in unrelated fields? _____

9) In your judgment, how did the special area of study contribute to the preparation of the students for whatever postsecondary studies they have pursued since high school?

_____

_____

10) How effective was the special area of study?

Very Effective				Not Effective
5	4	3	2	1

11) If one or more students failed to enroll in postsecondary studies, in your judgment, why has he/she not enrolled?

_____

_____

12) In retrospect, how do you think a special area of study such as you conducted can be improved in terms of:

A. Program Content _____

_____

B. Program Organization (unified or separate courses) _____

_____

C. Program Operation _____

_____

D. Ease or Difficulty _____

_____

E. Teacher Preparation _____

_____

F. Nature of Students Enrolled in Program _____

_____

13. Do you believe such a curriculum should be made available to high school students?

_____ Yes _____ No _____ Not Certain

Please explain _____

_____

_____

14. In your judgment, what special preparation does a teacher need for conducting a field of special study similar to the one in which you were involved as a teacher?

_____

_____

_____

15. Did you become involved in the teacher education service at Kent State University relating to pre-postsecondary curriculum development?

_____ Yes _____ No Please explain _____

_____

16. If your answer to question 15 was "yes," please indicate the level of help you received.

Very Helpful Not Helpful

5 4 3 2 1

Please explain _____

_____

On behalf of the Ohio Advisory Council for Vocational Education, I sincerely thank you for the information you have provided.

QUESTIONNAIRE 3 - STUDENT

If you will be willing to provide information about your involvement in this experimental program, it will be very useful to people who are planning programs to help Ohio high school students prepare for postsecondary studies and, eventually, jobs which are rewarding to them. All information you provide will be kept strictly confidential and will be used only as a part of total and average responses from all who participated in this study. You will be provided a summary of this information from all participants.

1. NAME _____ TELEPHONE _____

   ADDRESS _____

2. Name of High School From Which You Were Graduated: _____

   _____ Year Graduated _____

3. Name of Area or Joint Vocational School in which you were engaged in a special study.

   _____

4. What was your special area of study? _____

5. What were some of the major factors that influenced you to enroll in this area of special study?

   _____

   _____

6. What factors other than these did you feel should be explained to students in order that they can decide whether or not to enroll in special areas of studies?

   _____

   _____

   _____

   _____

7. Name of your primary teacher for the special area of study. _____

   _____

IF YOU HAVE BEEN ENROLLED IN A POSTSECONDARY INSTITUTION, PLEASE ANSWER QUESTIONS 8 THROUGH 15. IF YOU HAVE NOT BEEN ENROLLED, PLEASE SKIP TO QUESTION 16.

8. Name and address of postsecondary institution(s) in which you have been enrolled since high school.

   _____

   _____

9. Describe general content of course work you have undertaken at postsecondary institution(s) in which you have been enrolled.

_____

_____

_____

10. Is this course work closely related _____ somewhat related _____ not related _____ to your special area of study in high school?

11. If this postsecondary course work is "closely related" or "somewhat related" did your special high school curriculum help prepare you for it? _____Yes _____ No

12. If your answer to question 11 is "yes," please answer the following questions:

A. Specific elements of the program that helped _____

_____

B. If some elements did not help, please list. _____

_____

13. If your answer to question 11 is "no" please explain why. _____

_____

_____

14. If this postsecondary course work is not related to your areas of special study in high school, please explain why.

_____

_____

15. How successful do you feel that you have been with your postsecondary studies?

Highly Successful _____ Moderately Successful _____ Not Successful _____

16. If you have not enrolled in postsecondary study, do you plan to do so within the next year?

_____ Yes _____ No _____ Undecided

17. If your answer to question 16 is "yes," indicate the institution in which you plan to enroll.

_____

18. What general area of course work will you seek in this institution?

_____

_____

19. If your answer to question 16 is "no," with whom are you working for now?

Name of Firm _____

20. What is your job title? _____

21. What are your major duties? _____

22. Are you willing to provide information (which will be kept confidential) about your present earnings? _____ Yes _____ No

Are they nearer ___ $2.00/hour ___ $3.00/hour ___ $4.00/hour
___ $5.00/hour ___ $6.00/hour ___ $6.00/hour +

23. As you reflect back on your high school years, how would you suggest that the special area of study in which you were engaged can be improved?

A. Program Content _____

_____

B. Program Organization (Unified or Separate Courses) _____

_____

C. Program Operation _____

_____

D. Ease or Difficulty _____

_____

E. Teacher Preparation _____

_____

F. Nature of Students Enrolled in Program _____

_____

24. In your judgment, what percentage of the high school students in your class could have engaged profitably in a special area of study similar to the area in which you are engaged?

_____ 0-20% _____ 20-40% _____ 40-60% _____ 60% and over

25. Why not a higher percentage? _____

_____

_____

26. Why not a lower percentage? _____

_____

_____

On behalf of the Ohio Advisory Council for Vocational Education, I sincerely thank you for the information you have provided.